

Amendments to the Claims:

This listing of claims replaces all prior versions and listings of claims in the application:

Listing of Claims:

1. (Previously presented) A primary battery, comprising:

a cathode comprising

an oxide containing an alkali metal and pentavalent bismuth, the alkali metal being lithium or potassium, and

an electrochemically active cathode material different from the oxide;

an anode;

a separator between the cathode and the anode; and

an alkaline electrolyte.

2. (Currently amended) The battery of claim 1, wherein the oxide comprises a material selected from the group consisting of $MBiO_3$, M_3BiO_4 , M_7BiO_6 , $M_4Bi_2O_7$, and $M_5Bi_3O_{10}$, where M is Li, ~~Na, K, Rb and/or Cs; Li_5BiO_5 ; and Li_6KBiO_6 ; Li_6RbBiO_3 or K.~~

3. (Original) The battery of claim 1, wherein the oxide comprises an electrically conductive portion.

4. (Original) The battery of claim 3, wherein the electrically conductive portion is an electrically conductive surface coating comprising carbon or a metal oxide.

5. (Original) The battery of claim 4, wherein the electrically conductive surface coating comprises a material selected from the group consisting of graphite, carbon black, acetylene black, cobalt oxide, cobalt oxyhydroxide, silver oxide, silver nickel oxide, nickel oxyhydroxide, and indium oxide.

6. (Original) The battery of claim 1, wherein the anode comprises zinc.

7. (Original) The battery of claim 1, wherein the electrolyte comprises lithium hydroxide, sodium hydroxide, or potassium hydroxide.

8. (Original) The battery of claim 1, wherein the separator is capable of preventing soluble bismuth species from diffusing from the cathode to the anode.

9. (Original) The battery of claim 1, wherein the separator is capable of trapping soluble bismuth species.

10. (Previously presented) A primary battery, comprising:

a cathode comprising

an oxide containing an alkaline earth metal and pentavalent bismuth, and

an electrochemically active cathode material different from the oxide;

an anode;

a separator between the cathode and the anode; and

an alkaline electrolyte.

11. (Original) The battery of claim 10, wherein the alkaline earth metal is selected from the group consisting of magnesium, calcium, strontium, and barium.

12. (Previously presented) The battery of claim 10, wherein the oxide comprises a material selected from the group consisting of $MgBi_2O_6$, $SrBi_2O_6$, $Sr_2Bi_2O_7$, $LiSr_3BiO_6$, $NaSr_3BiO_6$, $(Ba,K)BiO_3$, $(Sr,K)BiO_3$, $Li_2Ba_5Bi_2O_{11}$, and $Ba_2Bi_2O_6$.

13. (Original) The battery of claim 10, wherein the oxide comprises an electrically conductive portion.

14. (Original) The battery of claim 13, wherein the electrically conductive portion is an electrically conductive surface coating comprising carbon or a metal oxide.

15. (Original) The battery of claim 14, wherein the electrically conductive surface coating comprises a material selected from the group consisting of graphite, carbon black, acetylene black, cobalt oxide, cobalt oxyhydroxide, silver oxide, silver nickel oxide, nickel oxyhydroxide, and indium oxide.

16. (Original) The battery of claim 10, wherein the oxide comprises cobalt oxyhydroxide and $MgBi_2O_6$.

17. (Original) The battery of claim 10, wherein the anode comprises zinc.

18. (Original) The battery of claim 10, wherein the electrolyte comprises lithium hydroxide, sodium hydroxide, or potassium hydroxide.

19. (Original) The battery of claim 10, wherein the oxide further comprises an alkali metal.

20. (Original) The battery of claim 10, wherein the separator is capable of preventing soluble bismuth species from diffusing from the cathode to the anode.

21. (Original) The battery of claim 10, wherein the separator is capable of trapping soluble bismuth species.

22. (Currently amended) A primary battery, comprising:

a cathode comprising

an oxide containing a metal and pentavalent bismuth, the metal being a main group metal, a lanthanide or a transition metal, other than silver, and

an electrochemically active cathode material different from the oxide;

an anode;

a separator between the cathode and the anode; and

an alkaline electrolyte.

23. (Previously presented) The battery of claim 22, wherein the transition metal is selected from the group consisting of scandium, vanadium, manganese, iron, cobalt, nickel, copper, ~~silver~~, zinc, yttrium, zirconium, niobium, molybdenum, ruthenium, palladium, cadmium, tantalum, and tungsten.

24. (Original) The battery of claim 22, wherein the lanthanide metal is selected from the group consisting of lanthanum, cerium, praseodymium, neodymium, samarium, europium, gadolinium, terbium, dysprosium, holmium, erbium, thulium, and ytterbium.

25. (Original) The battery of claim 22, wherein the metal is selected from the group consisting of indium, tin, antimony, and lead.

26. (Original) The battery of claim 22, wherein the oxide further comprises an alkali metal or an alkaline earth metal.

27. (Currently Amended) The battery of claim 22, wherein the oxide comprises a material selected from the group consisting of $ZnBi_2O_6$, $Cu_2Bi_2O_7$, $CdBi_2O_6$, $AgBiO_3$, $Ag_{25}Bi_{18}$, Ba_2YBiO_6 , Ba_2LaBiO_6 , Sr_2NdBiO_6 , Ba_2InBiO_6 , $Ba(Bi,Pb)O_3$, $Sr_{18}Ru_{1.9}Bi_{4.1}O_{33}$, $Li_8PdBi_2O_{10}$, and Sr_2ScBiO_6 .

28. (Original) The battery of claim 22, wherein the oxide comprises an electrically conductive portion.

29. (Original) The battery of claim 28, wherein the electrically conductive portion is an electrically conductive surface coating comprising carbon or a metal oxide.

30. (Original) The battery of claim 29, wherein the electrically conductive surface coating comprises a material selected from the group consisting of graphite, carbon black,

acetylene black, cobalt oxide, cobalt oxyhydroxide, silver oxide, silver nickel oxide, nickel oxyhydroxide, and indium oxide.

31. (Original) The battery of claim 22, wherein the oxide comprises cobalt oxyhydroxide and $ZnBi_2O_6$.

32. (Original) The battery of claim 22, wherein the anode comprises zinc.

33. (Original) The battery of claim 22, wherein the electrolyte comprises lithium hydroxide, sodium hydroxide, or potassium hydroxide.

34. (Original) The battery of claim 22, wherein the separator is capable of preventing soluble bismuth species from diffusing from the cathode to the anode.

35. (Original) The battery of claim 22, wherein the separator is capable of trapping soluble bismuth species.

36-41. Canceled

42. (Previously presented) The battery of claim 1, wherein the electrochemically active cathode material is selected from the group consisting of manganese dioxide, NiOOH nickel oxyhydroxide, AgO , $AgNiO_2$, and $AgCoO_2$.

43. (Previously presented) The battery of claim 1, wherein the electrochemically active cathode material comprises manganese dioxide.

44. (Previously presented) The battery of claim 1, wherein the electrochemically active cathode material comprises NiOOH nickel oxyhydroxide.

45. (Previously presented) The battery of claim 10, wherein the electrochemically active cathode material is selected from the group consisting of manganese dioxide, NiOOH nickel oxyhydroxide, AgO, AgNiO₂, and AgCoO₂.

46. (Previously presented) The battery of claim 10, wherein the electrochemically active cathode material comprises manganese dioxide.

47. (Previously presented) The battery of claim 10, wherein the electrochemically active cathode material comprises NiOOH nickel oxyhydroxide.

48. (Previously presented) The battery of claim 10, wherein the oxide comprises MgBi₂O₆, and the electrochemically active cathode material comprises NiOOH nickel oxyhydroxide.

49. (Previously presented) The battery of claim 22, wherein the electrochemically active cathode material is selected from the group consisting of manganese dioxide, NiOOH nickel oxyhydroxide, AgO, AgNiO₂, and AgCoO₂.

50. (Previously presented) The battery of claim 22, wherein the electrochemically active cathode material comprises manganese dioxide.

51. (Previously presented) The battery of claim 22, wherein the electrochemically active cathode material comprises NiOOH nickel oxyhydroxide.

52. (Cancelled)

53. (New) A primary battery, comprising:

a cathode comprising AgBiO₃ and at least 50% by weight of a second cathode active material selected from the group consisting of manganese dioxide and nickel oxyhydroxide; an anode;

a separator between the cathode and the anode; and
an alkaline electrolyte.

54. (New) The battery of claim 53, wherein the AgBiO_3 comprises an electrically conductive portion.

55. (New) The battery of claim 54, wherein the electrically conductive portion is an electrically conductive surface coating comprising carbon or a metal oxide.

56. (New) The battery of claim 55, wherein the electrically conductive surface coating comprises a material selected from the group consisting of graphite, carbon black, acetylene black, cobalt oxide, cobalt oxyhydroxide, silver oxide, silver nickel oxide, nickel oxyhydroxide, and indium oxide.

57. (New) The battery of claim 53, wherein the anode comprises zinc.

58. (New) A primary battery, comprising:
a cathode comprising
at least 30% of AgBiO_3 by weight, and
an electrochemically active cathode material different from AgBiO_3 ;
an anode;
a separator between the cathode and the anode; and
an alkaline electrolyte.

59. (New) The battery of claim 58, wherein the AgBiO_3 comprises an electrically conductive portion.

60. (New) The battery of claim 59, wherein the electrically conductive portion is an electrically conductive surface coating comprising carbon or a metal oxide.

61. (New) The battery of claim 60, wherein the electrically conductive surface coating comprises a material selected from the group consisting of graphite, carbon black, acetylene black, cobalt oxide, cobalt oxyhydroxide, silver oxide, silver nickel oxide, nickel oxyhydroxide, and indium oxide.

62. (New) The battery of claim 22, wherein the anode comprises zinc.

63. (New) The battery of claim 58, wherein the cathode comprises at least 40% of AgBiO_3 by weight.